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REMARKS

Applicant wishes to thank the Examiner for the detailed remarks. Claims 1-10 and 12-28 are pending.

Claims 1-5 were rejected under 35 U.S.C. §102(b) as being anticipated by *Duchemin*. Applicant respectfully traverses this rejection. *Duchemin* fails to disclose a *composite* leaf spring. *Duchemin* fails to even mention the word "composite." *Duchemin*, states, "The leaf or lamination of a spring shown in FIGS. 1 and 2 comprises a tubular element 1". [Col. 1, lines 54-55]. A leaf spring is formed from a multiple of leafs or laminations. *Duchemin* is only noting that the tubular element 1 may be a single "leaf" or "lamination" of a leaf spring. The Examiner's assertion that *Duchemin* is referring to a composite material cannot be sustained as a just interpretation. In fact, *Duchemin* discloses:

Likewise, instead of being constructed from a closed tube, *the tubular leaf or lamination* could be made from a split tube or a strip or sheet of *metal* which is bent or coiled onto itself and whose edges are welded or merely brought together, the weld line or the longitudinal split between the brought-together edges being placed on the side of the spring which is intended to be subjected to compressive stress.

[col. 2, lines 33-40; emphasis added]

Such manufacture is completely inapplicable to a composite spring. No composite leaf spring is disclosed or suggested by *Duchemin*. The claims are properly allowable.

More specifically, claim 5 recites wherein said forward leaf spring segment is thicker in depth than said rearward leaf spring segment. As illustrated in Figure 1, *Duchemin* discloses that the depth of the leaf spring is the same. Again this follows from *Duchemin* being manufactured from a tubular member.

Claims 6-10 and 12-28 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Duchemin* in view of *McGibbon* and further in view of *Davis*. Applicant respectfully traverses these rejections as there is absolutely no teaching, suggestion, or motivation to even modify *Duchemin* in view of *McGibbon*. *Duchemin* discloses that the "leaf is preferably constructed without welding from a tube of constant section whose wall has a uniform thickness." [See Col. 2, lines 23-40] The *Duchemin* leaf is hollow in cross-section. [See Figures 3-5]. Such hollow

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cross-section is consistent with a metallic tubular member - the only construction disclosed by *Duchemin*. The Examiner admits that *Duchemin* makes no mention of a solid composite material whatsoever.

The entire purpose of *Duchemin* is the manufacture of a leaf spring from a tubular metallic member in which:

The leaf is preferably constructed without welding from a tube of constant section whose wall has a uniform thickness. This tube is then deformed in a die so as to have a section whose width and thickness vary along its length.
[col. 2, lines 23-27]

McGibbon, however, discloses only a solid, completely linear composite leaf spring 10. There is no motivation to make the proposed combination as such manufacture is inapplicable to a composite material. It is improper to modify the base reference in such a way that it ruins the goal or function of the base reference. The Examiner's proposed modification would do so as a composite material cannot be "*deformed in a die*." In other words, the Examiner cannot properly just ignore the manufacturing method of the *Duchemin* leaf spring and the reasons for such manufacturing methods without destroying the underlying goal of *Duchemin* - that of providing a lightweight metallic leaf spring which is conducive to heat treatment. [See Col. 1, lines 23-25] The only motivation to make the combination as proposed is by following the knowledge disclosed within the present invention. This is impermissible usage of hindsight in an attempt to recreate Applicants device.

This failure to provide a proper combination of the *McGibbon* and *Duchemin* references defeats the rejection and all claims are allowable for this reason alone. Furthermore, *Davis* adds nothing to the proposed combination as *Davis* also does not disclose a composite material leaf spring. The Examiner purportedly relies upon *Davis* only to show a solid leaf spring as recited in page 3 of the office action; however, *McGibbon* alone discloses a solid leaf spring. The further combination of *Davis* with *Duchemin* in view of *McGibbon* is inherently inconstant. That is, the Examiner modifies a hollow metal leaf spring with a solid composite leaf spring then again with another solid metal leaf spring. The rejection cannot be sustained.

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Even if the combination were properly made, there are differences between the claimed invention and the teachings of the cited references so that the combination does not meet the limitations of Applicant's claims.

Claim 6 recites an axle beam attachment system comprising a cavity engageable with said mounting segment at only a single predefined location. The purported combination fails to disclose or suggest a cavity for mounting at only a single predefined location. As discussed above, *Duchemin* disclose only a hollow metallic leaf spring manufactured from a tubular member. No axle beam attachment system is disclosed. *McGibbon et al* discloses that "The retainer members 26 and 28 physically surround and thus capture the spring and a thin rubber sleeve 32 referred to as an isolator is cement bonded between the retainer members and the spring to prevent chafing of the latter." [See Col 2, lines 42-26] *McGibbon* discloses only a solid, completely linear leaf spring 10 which is mounted within a rectilinear hat shaped retaining member 26 such that one mounting location is equal to any other. The claims are properly allowable. That is, no single predefined location is disclosed or suggested as the proposed combination teaches that the retainer members 26 and 28 may be cement bonded anywhere along the leaf spring.

Claim 15 recites an axle beam attachment system which interlocks at a single predetermined location along said mounting segment. The purported combination fails to disclose or suggest such interlocking as the only attachment is physically surrounding and capture the spring along with the cement bonding of the rubber isolator sleeve 32. Again, as *McGibbon* discloses only a solid, completely linear leaf spring 10 which is mounted within a similarly rectilinear hat shaped retaining member 26, no interlocking whatsoever is disclosed or suggested. All retention is through compression and/or cement bonding. The claims are properly allowable.

In addition to the interlocking as discussed above, claim 22 recites mounting an axle beam to the axle beam attachment system such that the axle beam is transverse to the composite leaf spring. The purported combination fails to disclose or suggest such transverse axle arrangement. Notably, *McGibbon* discloses that the leaf spring is parallel to the knuckle 14 which would contain the axle within the center aperture (not numbered). The claims are properly allowable.

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Claim 24 was rejected under 35 U.S.C. §103(a) as being unpatentable over *Duchemin* in view of *McGibbon* and further in view of *Davis* and further in view of *Constantinescu*. Applicant respectfully traverses these rejections as there is absolutely no teaching, suggestion, or motivation to modify *Duchemin* in view of *McGibbon* and further in view of *Davis* and further in view of *Constantinescu* as proposed.

Initially, *Constantinescu* describes box spring and the like for bedding and furniture. In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). Under no just interpretation would *Constantinescu* be in Applicant's field of endeavor or be reasonably pertinent to the particular problem that the applicant has solved. As just one example, the very different weights involved would never lead a suspension engineer to investigate box spring mattress designs. *Constantinescu* is not analogous art to *Duchemin*, *McGibbon*, *Davis* or Applicant's invention. The proposed combination is improper.

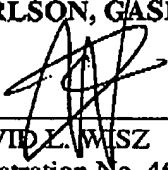
As discussed above, *McGibbon* discloses only a solid, completely linear leaf spring 10 which is mounted within a similarly rectilinear hat shaped retaining member 26, no interlocking whatsoever is disclosed or suggested. *Constantinescu* generally discloses fittings integrally formed to a spring bodies within a mattress. As mentioned above, the very different weights involved would never lead a suspension engineer to investigate box spring mattress design such that there is no motivation to combine the light weight low stress fittings of *Constantinescu* with the other cited references which are relatively high stress leaf springs. The only motivation to make the combination as proposed is by following the knowledge disclosed within the present invention. This is impermissible usage of Hindsight in an attempt to recreate Applicants device. Accordingly, claim 24 is properly allowable.

Applicant believes that no additional fees are required, however, should any fees or extensions be required, the Commissioner is authorized to charge Deposit Account No. 50-1482, in the name of Carlson, Gaskey & Olds, P.C.

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Applicant respectfully submits that this case is in condition for allowance. If the Examiner believes that a teleconference will facilitate moving this case forward to being issued, Applicant's representative can be contacted at the number indicated below.

Respectfully Submitted,
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